

Patent claims

1. Method of joint data transmission of digital source data and control data between data sources and data sinks that are subscribers (10, 11, 12, 13) of a unidirectionally operated communication network (1) having a ring configuration,

5 in which source data and control data are transmitted in a format which prescribes a clocked sequence of individual bit groups (2) of the same bit width which are transmitted in a continuous data stream, in each case specific bit positions predetermined by the format are reserved,

10 15 in which the subscribers (10, 11, 12, 13) sample data in each case with a first sampling frequency and the communication network samples data with a second sampling frequency, which is an integral multiple of the first sampling frequency,

20 in which, within each bit group (2), at least one contiguous region (23) with a predetermined number of bit positions can be reserved for source data and the contiguous region(s) are in each case assigned to a subscriber address,

25 30 in which at least one contiguous region (23) within a bit group (2) is in each case assigned a significant bit position (23a), which in the case of one of the subscribers (10, 11, 12, 13) is set to a first logic level ("1") and in the case of all the other subscribers is set to an opposed, second logic level ("0").

2. Method according to claim 1, characterized in that the first sampling frequency and the second sampling frequency are synchronized to a clock-pulse signal.

35 3. Method according to one of the preceding claims,

characterized in that, for at least one subscriber (10, 11, 12, 13), the second sampling frequency has any desired phase shift with respect to the first sampling frequency.

5

4. Method according to one of the preceding claims, characterized in that the multiple of the first sampling frequency corresponds exactly to the number of subscribers (10, 11, 12, 13) of the communication network (1).

10

5. Method according to one of claims 1 to 4, characterized in that the number of subscribers (10, 11, 12, 13) of the communication network (1) is an integral multiple of the multiple of the first sampling frequency.

15

6. Method according to one of the preceding claims, characterized in that the significant bit position within the contiguous region is the least-significant bit position (LSB) for source data.

20

7. Method according to one of the preceding claims, characterized in that at least some of the subscribers (10, 11, 12, 13) of the communication network (1) are designed as microphone units, the corresponding analog audio signals being sampled from the assigned microphone units and fed to the communication network (1) in the form of digital signals.

25

8. Use of a method according to one of the preceding claims, characterized in that the communication network (1) is designed as a MOST network for use in a motor vehicle and/or in the household.

30